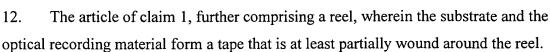
Attorney Docket Q01-1019-US1 06837-112001

- An article, comprising:
 a substrate in the form of a tape; and
 an optical recording material disposed over the substrate.
- 2. The article of claim 1, wherein the substrate has a thickness of less than about one millimeter.
- 3. The article of claim 1, wherein the article comprises a flexible article.
- 4. The article of claim 1, wherein the article has an aspect ratio of at least about 1.5.
- 5. The article of claim 1, wherein the substrate comprises a polymer.
- 6. The article of claim 5, wherein the polymer is selected from the group consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.
- 7. The article of claim 1, wherein the optical recording material comprises an optical phase change material.
- 8. The article of claim 7, wherein the optical recording material comprises germanium, antimony, tellurium and combinations thereof.
- 9. The article of claim 1, wherein the optical recording material comprises a magneto-optic material.
- 10. The article of claim 9, wherein the magneto-optic material comprises tellurium, iron, cobalt and combinations thereof.
- 11. The article of claim 1, further comprising a reflective material between the substrate and the optical recording material.

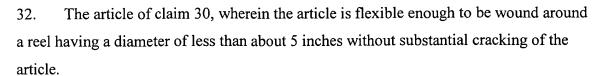
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- 13. An article, comprising: a substrate having a thickness of less than about one millimeter; and an optical recording material disposed over by the substrate.
- 14. The article of claim 13, wherein the thickness of the substrate is less than about 500 microns.
- The article of claim 13, wherein the thickness of the substrate is less than about 15. 100 microns.
- The article of claim 13, wherein the thickness of the substrate is less than about 50 16. microns.
- The article of claim 13, wherein the thickness of the substrate is less than about 10 17. microns.
- 18. The article of claim 13, wherein the thickness of the substrate is from about 2 microns to about 8 microns.
- 19. The article of claim 13, wherein the thickness of the substrate is from about 4 microns to about 6 microns.
- The article of claim 13, wherein the article comprises a flexible article. 20.
- 21. The article of claim 13, wherein the article has an aspect ratio of at least about
- 22. The article of claim 13, wherein the substrate comprises a polymer.

- 23. The article of claim 22, wherein the polymer is selected from the group consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.
- 24. The article of claim 13, wherein the optical recording material comprises an optical phase change material.
- 25. The article of claim 24, wherein the optical phase change material comprises germanium, antimony, tellurium and combinations thereof.
- 26. The article of claim 13, wherein the optical recording material comprises a magneto-optic material.
- 27. The article of claim 26, wherein the magneto-optic material comprises tellurium, iron, cobalt and combinations thereof.
- 28. The article of claim 13, further comprising a reflective material between the substrate and the optical recording material.
- 29. The article of claim 13, further comprising a reel, wherein the substrate and the optical recording material form a tape that is at least partially wound around the reel.
- 30. An article, comprising: a substrate; and an optical recording material disposed over the substrate, wherein the article is flexible.
- 31. The article of claim 30, wherein the article is flexible enough to be wound around a reel having a diameter of less than about 10 inches without substantial cracking of the article.

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- The article of claim 30, wherein the article is flexible enough to be wound around 33. a reel having a diameter of less than about 3 inches without substantial cracking of the article.
- The article of claim 30, wherein the article is flexible enough to be wound around 34. a reel having a diameter of less than about one inch without substantial cracking of the article.
- The article of claim 30, wherein the article has an aspect ratio of at least about 35. 1.5.
- 36. The article of claim 30, wherein the substrate comprises a polymer.
- 37. The article of claim 36, wherein the polymer is selected from the group consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.
- The article of claim 30, wherein the optical recording material comprises an 38. optical phase change material.
- 39. The article of claim 38, wherein the optical phase change material comprises germanium, antimony, tellurium and combinations thereof.
- 40. The article of claim 30, wherein the optical recording material comprises a magneto-optic material.
- The article of claim 40, wherein the magneto-optic material comprises tellurium, 41. iron, cobalt and combinations thereof.



- 42. The article of claim 30, further comprising a reflective material between the substrate and the optical recording material.
- 43. The article of claim 30, further comprising a reel, wherein the substrate and the optical recording material form a tape that is at least partially wound around the reel.
- 44. An article, comprising:a substrate;an optical recording material; anda reflective material between the substrate and the optical recording material.
- 45. The article of claim 44, wherein the substrate comprises a polymer.
- 46. The article of claim 45, wherein the polymer is selected from the group consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.
- 47. The article of claim 44, wherein the optical recording material comprises an optical phase change material.
- 48. The article of claim 47, wherein the optical phase change material comprises germanium, antimony, tellurium and combinations thereof.
- 49. The article of claim 44, wherein the optical recording material comprises a magneto-optic material.
- 50. The article of claim 49, wherein the magneto-optic material comprises tellurium, iron, cobalt and combinations thereof.
- 51. The article of claim 44, wherein the reflective layer comprises aluminum.

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- 52. The article of claim 51, wherein the reflective layer further comprises titanium.
- 53. An article, comprising:a substrate; anda sputter deposited optical recording material disposed over the substrate.
- 54. The article of claim 53, wherein the article is in the shape of a tape.
- 55. The article of claim 53, wherein the article comprises a flexible article.
- 56. The article of claim 53, wherein the substrate has a thickness of less than about one millimeter.
- 57. The article of claim 53, wherein the article has an aspect ratio of at least about
- 58. The article of claim 53, wherein the substrate comprises a polymer.
- 59. The article of claim 58, wherein the polymer is selected from the group consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.
- 60. The article of claim 53, wherein the sputter deposited optical recording material comprises a sputter deposited optical phase change material.
- 61. The article of claim 60, wherein the sputter deposited optical phase change material comprises germanium, antimony, tellurium and combinations thereof.
- 62. The article of claim 53, wherein the sputter deposited optical recording material comprises a sputter deposited magneto-optic material.

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- The article of claim 62, wherein the sputter deposited magneto-optic material 63. comprises tellurium, iron, cobalt and combinations thereof.
- 64. The article of claim 53, further comprising a reflective material between the substrate and the sputter deposited optical recroding material.
- 65. The article of claim 53, further comprising a reel, wherein the substrate and the sputter deposited optical recording material form a tape that is at least partially wound around the reel.
- 66. A system, comprising:
 - a first reel;
 - a second reel; and
 - a tape, comprising:
 - a substrate; and
 - an optical recording material,

wherein the tape is at least partially wound around at least one reel selected from the group consisting of the first reel and the second reel.

- 67. The system of claim 66, further comprising an energy source capable of writing information on the tape or erasing information from the tape.
- The system of claim 67, further comprising a sensor capable of reading 68. information from the tape.
- The system of claim 66, further comprising a sensor capable of reading 69. information from the tape.
- 70. The system of claim 66, wherein the substrate has a thickness of less than about one millimeter.

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- 71. The system of claim 66, wherein the article comprises a flexible article.
- 72. The system of claim 66, wherein the article has an aspect ratio of at least about
- 73. The system of claim 66, wherein the substrate comprises a polymer.
- The system of claim 73, wherein the polymer is selected from the group 74. consisting of polyethylenenaphthalates, polyimides, polyaramids and combinations thereof.
- 75. The system of claim 66, wherein the optical recording material comprises an optical phase change material.
- 76. The system of claim 75, wherein the optical phase change material comprises germanium, antimony, tellurium and combinations thereof.
- 77. The system of claim 66, wherein the optical recording material comprises a magneto-optic material.
- The system of claim 77, wherein the magneto-optic material comprises tellurium, 78. iron, cobalt and combinations thereof.
- 79. The system of claim 66, wherein the optical recording material comprises a sputter deposited optical recording material.
- 80. The system of claim 66, further comprising a reflective material between the substrate and the optical recording material.
- 81. A method, comprising:



sputter depositing an optical recording material on an article having a substrate in the shape of a tape.

82. A method, comprising:

sputter depositing an optical recording material on an article having a flexible substrate.

83. A method, comprising:

sputter depositing an optical recording material on a substrate with a thickness of less than about one millimeter.

84. A method, comprising:

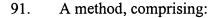
sputter depositing an optical recording material onto a reflective material, the reflective material being disposed over a substrate.

85. A method, comprising:

writing information on a tape, the tape comprising a substrate and an optical recording material disposed over the substrate.

- 86. The method of claim 85, wherein the information is written on the tape by heating a portion of the optical recording material.
- 87. The method of claim 86, wherein heating includes irradiating the tape.
- 88. The method of claim 85, further comprising erasing at least a portion of the information from the tape.
- 89. The method of claim 88, wherein the information is erased from the tape by heating a portion of the optical recording material.
- 90. The method of claim 88, wherein heating includes irradiating the tape.

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erasing information from a tape, the tape comprising a substrate and an optical recording material disposed over the substrate.

- 92. The method of claim 91, wherein the information is erased from the tape by heating a portion of the optical recording material.
- 93. The method of claim 91, wherein heating includes irradiating the tape.
- 94. A data storage tape, comprising:
 - a substrate; and
- a data storage layer disposed over the substrate, the data storage layer comprising an optical recording material.
- 95. The data storage tape of claim 94, wherein the substrate is in the form of a tape.
- 96. The data storage tape of claim 94, wherein the substrate has a thickness of less than about one millimeter.
- 97. The data storage tape of claim 94, wherein the data storage tape comprises a flexible article.
- 98. The data storage tape of claim 94, wherein the data storage tape has an aspect ratio of at least about 1.5.
- 99. The data storage tape of claim 94, wherein the optical recording material comprises an optical phase change material.
- 100. The data storage tape of claim 94, wherein the optical recording material comprises a magneto-optic material.